

Five major hospitals in Nicaragua have digital x-ray now.

## The dream that came true

With the installation of two complete PACS networks and the upgrade to the latest level of three others, the NICHEd team has recently finished its project “Going Digital”

Five years ago, Willem Vuisting, a former Philips VP was asked to help to solve a frustrating situation in Nicaragua. Through Philips Healthcare Refurbished Systems two HDi5000 ultrasound systems were donated and worked fine for six months but a severe thunderstorm made a sudden end to the highly appreciated level of medical care. High voltage spikes on the power lines destroyed several electronic parts and the hospital was thrown back in time.

What started with a onetime investigation trip ended recently with trip number 10. Willem’s observations were clear: If you want to do a successful donation to developing countries, first guarantee to have good pre-installations (earth provisions and power line protection), deliver good quality equipment via Refurbished Systems and above all, provide training and service, including spare parts and long term contracts. With the installation of x-ray and ultrasound systems in more than ten different hospitals in Nicaragua and years of successful use, this concept has proven to be the only right one.

Already at his first trip it surprised Willem how radiology technicians could work in

the film processing rooms and be able to deliver something that even could look as an x-ray image.



A challenging idea was born: wouldn't it be fantastic to transfer those old fashioned analog film based x-ray departments into a modern digital one without chemical pollution with health risk for the operators and film archives that looked like the result of an earthquake? The dream was there.



The first step to realize this dream was to arrange good quality x-ray systems. The ones in Nicaragua were all very old, most of them only partly functioning and some completely broken. With the help of Philips Healthcare in Best and Hamburg and with

Refurbished Systems in Veldhoven we were able to install four new Bucky rooms, three mobile x-ray systems, three mobile C-arm units, six ultrasound workstations and a lot of additional medical equipment like patient monitors and defibrillators. PCR units (digital cassette readers) came already with the new x-ray rooms and the first thought was to use digital film printers to make hard copies of the images for diagnostic purposes. However the price of digital film does not match with the economical scale of hospitals in developing countries with the result that end users switched back to the analogue film very fast.

### **The dream turned into a nightmare.**

Now that we woke up from the dream and experienced the reality we decided to take the big step to fully digitize the hospitals, including an electronic archiving system and viewing stations at different locations in the hospitals. Also an alternative for the expensive film printing had to be found. At first meetings with Philips IT specialists it became clear that we had to go for a state of the art PACS network but the high level solution in the portfolio of Philips was far too expensive to realize this goal in Nicaragua. Finally we found a software company in Uruguay that offered suitable packages for reasonable prizes. The only thing we had to do was finding refurbished PC's and monitors to build the workstations. Once that was done we could build up a complete network at the NICHEd location in the factory of Refurbished Systems. After thorough testing all parts were packed and shipped to three different hospitals in Nicaragua. In the meantime network cables were pulled at the sites and in July last year we could

do the installation and training in less than two weeks. As the chosen solution is very simple and intuitive, yet very complete and suitable for the doctors, training sessions could be done within one hour. Per hospital an IT engineer was assigned to service the network and give support where needed.

In the meantime NICHEd received an urgent request for more support, in particular for hospital Velez Paiz in Managua and José Schendel in Corinto for which new Bucky systems, donated by Philips Hamburg were installed and of course PACS networks built by us the same way as we did last year. In March this year both new networks have been installed.



The PACS installations from last year were all visited to bring them to the latest version, including Spanish user interfaces. At that occasion end users informed us with pride that now with the digital solution they could help 100 to sometimes 200 patients a day which is a great improvement for both the doctors and the patients.

### **Truly a dream came true!**

On behalf of NICHEd, Martien van Overeem

Want to learn more about the NICHEd activities? See [www.nichednl.com](http://www.nichednl.com)

Based on the great experiences in Nicaragua, we decided to transfer the PACS activities to a commercial level for hospitals in mid-economy countries and for that we established the company CRCB-PACS B.V. Please visit us at [www.crcb-pacs.com](http://www.crcb-pacs.com)